

Case Report

A case series on Poncet's disease: Tuberculous Rheumatism

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Abbreviations:

TB, Tuberculosis

CBC, Complete Blood Count

CRP, C-Reactive Protein

ESR, Erythrocyte Sedimentation Rate

ASO, Antistreptolysin O

ABSTRACT:

Patients with active tuberculosis may develop Poncet Disease, a type of reactive arthritis. It is an uncommon, non-specific symmetric polyarthritis that is infectious and devastating. When atypical arthritis without a known cause coexists with non-articular TB. Poncet disease should be taken into account. Here we describe 2 patients came with complaints of joint pain and swelling involving multiple small and large joints. On evaluation tuberculosis was found to be positive. They were started on Anti-Tuberculosis Therapy following which their symptoms were resolved.

Keywords:

Poncet Disease

Tuberculous arthritis

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Extraarticular tuberculosis

Tuberculosis

INTRODUCTION

Rare and Reactive acute onset polyarthritis known as Tuberculous Rheumatism is connected to active extra-articular tuberculosis. It manifests as symmetrical involvement of several joints without showing signs of an active infection and goes away without leaving behind any long-term consequences or joint damage [1]. In clinical practise, the diagnosis is typically not taken into account unless the symptoms cannot be explained by another disease process. We present two patients with debilitating

polyarthritis who developed Extra pulmonary and pleural TB later in the course of the disease. In the light of these observations we propose that TB be included in the differentials and work-up of polyarthritis, especially in endemic regions.

CASE 1

A 56-Year-old male, known case of hypothyroidism and systemic hypertension came with complaints of fever for 6 months and joint pain for 1 month. Fever was insidious in onset, high grade, associated with chills and rigor. Fever was more during the evening.

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Joint pain was acute in onset, involving upper and lower limbs. He also complained of migratory pain first involving lower limbs and then gradually progressed to upper limb. Joint pain worsens with activity but not associated with morning stiffness. No history of burning micturition or sore throat. On Examination swelling was present in left middle finger's proximal pharyngeal joint and left ankle joint. Tenderness was present in bilateral elbow, shoulder and knee joint. All other joint and other systemic examinations were within the normal limits. His initial investigations revealed elevated C-reactive protein (216 Mg/L), Erythrocyte sedimentation rate (103 mm/hr) and CBC was normal. X-ray of joints were done and was found to be normal. He was started on NSAIDS but patient had persistent joint pain and hence in view of persistent joint pain, extensive workup was done. RA factor, anti-CCP was sent and was negative. ASO titers were checked and was normal. ECHO was done and was within normal limits. Blood culture was sent and showed no growth. His repeated ESR was elevated. PET CT was done and it showed FDG intake in supra/infra diaphragmatic lymph nodes, tonsil, spleen and left external iliac lymph node. Biopsy was done from left external iliac lymph node. Histopathology of lymph node shows caseating granulomatous lymphadenitis - suggestive of tuberculosis and Gene-Xpert was positive for *Mycobacterium tuberculosis*. Hence, with the provisional diagnosis of reactive polyarthritis associated with extra-pulmonary tuberculosis, patient was started on standard anti-tuberculous therapy (ATT) with four-drug regimen (isoniazid,

rifampicin, ethambutol and pyrazinamide) and pyridoxine supplementation. There was alleviation of all the symptoms with no joint swelling and tenderness on examination. ESR reduced to 54 mm/hr and returned to normal over the next 3 months. He continued on the four-drug regimen for 2 months and then he was treated with a two-drug regimen with isoniazid and rifampicin for 2 months. One years following the completion of treatment, he remained free of symptoms, laboratory parameters were normal.

CASE 2

A 65-year-old male known case of type 2 diabetes mellitus and bronchial asthma came with complaints of swelling and pain in small joints of hand and bilateral knees for 2 weeks. It was acute in onset and progressive. It first involved knee joint then it started involving small joints of upper limb. He also complaints of loss of weight of 10 kg in 2 months. He also complained of mild breathing difficulty while doing strenuous activities. On examination swelling was present in proximal interphalangeal joint and metacarpal phalangeal joint. It was associated with tenderness of proximal interphalangeal joint and metacarpal phalangeal joint. All other joint and other systemic examinations were within the normal limits. His initial investigations revealed elevated ESR (180 mm/hr) and CBC was normal. X-ray of joints were done and was found to be normal. RA Factor and anti-CCP was checked to rule out rheumatoid arthritis and was found to be negative. Chest X-ray was done and it showed mild pleural effusion on right side. Mantoux test was done and was strongly positive of 20 mm.

Pleural Fluid aspiration was done. Pleural fluid cell count was 3600 (predominantly lymphocytic), ADA was 68, LDH was 1448. Pleural fluid aspiration was suggestive of tuberculosis. Hence with diagnosis of reactive arthritis secondary to pleural tuberculosis, he was started on anti-tuberculous therapy (ATT) with four-drug regimen (isoniazid, rifampicin, ethambutol, and pyrazinamide). He improved symptomatically after starting the ATT drugs. His joint pain resolved after 1 months. His repeat ESR reduced to 23 mm/hr from 85 mm/hr.

DISCUSSION

Joint involvement in TB patients can result from either poncet illness or tuberculous arthritis, which caused by the invasion of a joint by tubercular bacilli. Most cases of tuberculous arthritis are monoarticular, and the organism can be isolated from the joint. It typically happens as a result of direct invasion or hematogenous dissemination from primary organ implicated. In contrast, poncet disease, a type of aseptic arthritis that develops during the acute phase of TB infection, mostly causes numerous joint discomforts. Erythema nodosum and extrapulmonary tuberculosis are typical descriptions of poncet disease [2]. The gold standard for diagnosis continues to be microbiological confirmation of tubercular bacilli from any body fluids or tissue. Why sterile reactive polyarthritis aggravates visceral TB is still mostly unknown. It has been proposed that mycobacterial antigen induces T-cell activation which then results in the lymphocytes cross-reactivity with proteoglycans found in cartilage [3]. Technologies based on polymerase chain reaction, such as CB-NAAT, are more

sensitive than microscopy and simultaneously assess drug resistance. Additional evidence for tuberculosis includes radiological symptoms and tuberculin skin testing in order to identify skeletal tuberculosis. The preferred imaging method for determining the degree and severity of involvement is magnetic resonance imaging. In areas where TB is widespread, the diagnosis is typically one of exclusion and should be taken into account in all patients with symmetric arthritis. The primary cause is typically believed to be extrapulmonary tuberculosis, particularly lymph node TB. Further supporting the diagnosis is the total disappearance of rheumatic symptoms when receiving anti-tuberculosis treatment. Anti-tubercular medications could cure poncet disease arthritis for anywhere between a week to a few months. Due to the non-specific and vague clinical presentation, a diagnosis in these Patients is frequently delayed. Better joint function preservation is achieved with early therapy initiation. A full course of ATT for six months and non-weight bearing exercises make up the mainstay of treatment [4]. Surgery should only be performed in situations where there is a significant abscess, serious joint damage or major joint abnormalities that restrict patient functionality. Only in cases where there is still no improvement after 4-5 months of ATT, we can consider further surgical treatments like synovectomy and necessary debridement.

CONCLUSION

To sum up, individuals with fever and polyarthritis of unknown cause should have active tuberculosis taken into account when making a differential diagnosis, especially in areas with a high

tuberculosis prevalence. This clinical entity's diagnosis is still difficult to make and necessitates a high degree of suspicion. This condition is probably underdiagnosed because not all practitioners are aware of Poncet disease. Anti-tubercular treatment is the cornerstone of care.

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None

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This article does not contain any studies with human participant or animal performed by any of the author

Informed consent

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Supplementary material

None

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